ABSTRACT

An electrical device having a heat conductive housing has a flexible circuit board attached to the surface of the housing to control or take readings from the electrical. The flexible circuit board preferably has an adhesive coating on at least a portion of one side for adhering the flexible circuit board to the surface of the metal housing. At least one component mounted on the flexible circuit breaker generates heat, which is dissipated via the conductive housing. This arrangement provides a compact design that reduces the overall size of the electrical device and its associated circuitry, and also avoids the problem of dielectric separation between the electronic components and the heat sink. The electrical device may be a solenoid, a motor, a position detector, or a relay.